

FRESHMAN EDITION TOIKE OIKE



TOIKE OIKE, TOIKE OIKE, OLLUM TE CHOLLUM TE CHAY,
SCHOOL OF SCIENCE, SCHOOL OF SCIENCE, HURRAY, HURRAY, HURRAY.

Vol. XXXIII

Tuesday, September 22, 1941

No. 1

PRESIDENT'S MESSAGE

Freshmen:—

On behalf of the Engineering Society, I welcome you to School. It is yours to enjoy and work for, and only in working for School will you come to realize in full the pleasure and satisfaction that it affords. In short, you will get out of the next four years exactly what you put into them.

You have entered upon a new life. Now you are looked upon as men, and as men are expected to act. Gone now is the molly coddling experienced by students while they are in public and high schools. Here it is necessary for each student to stand on his own two feet. There are no detentions, no monthly reports, and no one cares whether or not you attend your lectures.

We are very proud of School. Her prestige is great in academics as well as in sport. To you, our newest brothers in this great brotherhood of Schoolmen, we look to carry on the fine achievements and traditions of our School.

You will observe in the rules for Freshmen a note regarding Fatigue Duty.

Do not think that this duty is an imposition against your dignity. It is an old time-honoured custom and we have all had our turn at it. Fatigue Duty consists of giving only one day, or possibly two, to assist the girls in the store or to help in the preparation of one of our social affairs. The Engineering Society is your Society and Fatigue Duty is the freshman's contribution to it. Remember, too, that the time you spend in this manner is not to be compared with the time given by other members and officers of the Society. Evasion of Fatigue Duty casts a direct reflection not only upon yourself but upon your whole year.

We want athletes from 4T5. As you will learn, Freshmen and Sophomores line up together at Junior School in all inter-faculty athletics. If you have any desire to play football, hockey, or any other sports, don't fail to come out when the team managers call for men.

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THE DEAN GREETES THE FIRST YEAR

To the young men who in large numbers now enter upon the study of engineering in the University of Toronto a particularly cordial welcome should be extended. The country is in need of you. At no time in history has a heavier responsibility rested upon the scientist and the engineer. The application of scientific principles to the exigencies of war and overwhelming production of the complicated apparatus of defence and offence will probably determine the outcome of the world struggle in which we are now engaged.

While in times such as these a young man may, through the medium of special short courses in the scientific field, quickly make himself useful for limited and routine tasks, there is an insistent demand for men with a much more thorough training. The scope of war technology is wide and deep and the technical problems of maintaining the public services and efficiently and economically conducting peaceful industry are no less exacting. Those undertakings that touch the borders of the unknown, or pass over into it, as

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RULES FOR FRESHMEN

The following rules have been drawn up and approved and will be observed by all Freshmen during the time stated.

The first group of rules will be enforced during the whole school year.

1. The first year will supply all fatigue parties required by the Engineering Society Executive. These parties will be detailed by the first year executive.
2. The first year will provide one man daily to report to the President of the Engineering Society for whatever services may be required. Members of the first year executive and Engineering Society Committees are exempt.
3. Freshmen shall NOT use the east door of the Engineering Building.

The following rules must be observed up to the time of the initiation:

1. All Freshmen will wear a green tie of the style approved and supplied by the Supply Department of the Engineering Society. After the initiation a green button will be presented which will be worn for the remainder of the year.
2. All Freshmen will enter the School buildings by the basement doors only.
3. Freshmen will remove their hats on entering all School buildings.

(There will be no hazing.)

The initiation ceremony will be arranged by representatives of the first and second year executive, with the approval of the Faculty and Engineering Society. You will be notified in due time of further details regarding this important function.

The Toike Oike

Devoted to the interests of the Under-graduates of the Faculty of Applied Science.

Published Every Now and Then by The Engineering Society of the University of Toronto.

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C.O.T.C. CAMP

The summer of 1941 ought long to be remembered. Of that summer two delightful weeks were spent at that ever increasingly popular resort for eligible young bachelors, known as Camp Niagara. Throughout the previous winter we endeavoured to prepare ourselves and be prepared for this occasion. In addition, a few preliminary dress rehearsals were held on the campus where we demonstrated how web equipment can be assembled and worn in sixty different ways to suit both the individual taste and person. At these parades we became conscious of a few fundamental facts formerly overlooked regarding army life; such as there is no room in a knapsack for a field marshal's baton, and, regardless of how cleverly you may compress your private luxuries into a pack, it all must be carried!

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In Memoriam

CHARLES MITCHELL was born sixty-nine years ago, in the then small village of Petrolia.

He was a quiet normal boy, with a keen liking for most outdoor recreations such as hiking and climbing, but in particular, he displayed an enthusiasm for water sports.

He frequently went boating and swimming in the nearby rivers and streams, and almost habitually would forget to return home at the proper hour. When chums accompanied him on fishing trips, they often watched him sit, entranced, hour after hour, rod in hand, gazing dreamily into the swirling currents of some fast flowing stream. He didn't feel the tug of some unlucky fish at his bait, nor would he draw in his line until the cry of his friends rang sharply in his ear, "you've got one! Charlie". Instead he gazed into the swiftly moving current and eddies which poured determinedly past him in a never ending stream. He didn't see the few meagre fish swimming about in the water but only the vast store of power that it held. He became obsessed with the idea that this unlimited source of energy must be harnessed and like the stream, nothing could deter him from his course.

At the age of twenty-two he was graduated from the University of Toronto as an engineer, and immediately turned his attention towards his one ambition—to manufacture power.

Two years after his graduation he became the city engineer of Niagara Falls and in 1900 practised privately as an expert consulting engineer in the field of hydro electricity. After gaining some experience as assistant engineer for the Ontario Power Company, he left Canada for Europe and studied the hydro-electric systems throughout the continent.

On returning in 1907 he compiled a report of his studies abroad which undoubtedly formed the solid basis for the present Ontario Hydro Electric system which is such a boom to this province.

Once again his thoughts turned towards the future. In 1896 he published a mathematical and technical work on Aerial Mechanical Flight. This underlying knowledge of flying enabled him to publish a treatise in 1911 on Aerial Navigation, the importance of which was fully realized and appreciated a few years later when the first Great War brought about a sudden demand for information in the new science.

Without hesitation he enlisted in 1914 as a Canadian soldier. His advancement in the army was rapid. Without detailing his various and invaluable services, he emerged as a brigadier general and was the proud recipient of decorations from the governments of England, Canada, Belgium, France and Italy.

When General Mitchell returned from the war he was appointed Dean of the Faculty of Applied Science and Engineering, a position which he held for twenty-two years. He had resigned, only a few months before his untimely death, with one purpose in mind,—To serve his country in the second World War.

As Dean of the Faculty, his vision of the power of science enabled him to build up a School which is admittedly one of the finest in America.

The obsession of his youth to learn the secrets of nature for the benefit of mankind became the foundation for a great and glorious career of a model Canadian; and the thousands of scientists who were privileged to become associated with him deeply mourn his passing.

In private life he was sociable and affable. In public, he was always friendly, tolerant, and sincere. In the presentation of his ideas he was clear, positive and dynamic. He lived a life in accordance with the principles he believed, and never did he flag or fail. His childhood vision was the driving force into a life of usefulness and inspiration for the benefit of mankind.

To your memory—Brigadier-General Charles Hamilton Mitchell, C.B., C.M.G., D.S.O., C.E., LL.D., D.Eng., we say in all solemnity we respect your glorious past and revere your undying memory.

You represent in all their implication the words of Shakespeare

"His life was gentle, and the elements
So mix'd in him that Nature might stand up
And say to all the world
This was a man."

ARCHITECTURAL CLUB

When this issue of Toike Oike appears all but First Year Architecture will be (or should be) at Gull Lake Survey Camp. While the newcomers make themselves familiar with the School, we up Minden way, will endeavour to plan a suitable reception to be held when we return. This delightful get-together at which the club executives will be elected for the year shall take place early in October. Freshmen are hereby given notice that they will be expected to nominate and elect a first year representative for the club executive.

It is the earnest desire of the club chairman that all members will co-operate to make a special success of our 1941-42 activities. Certainly, the Department has a rare opportunity for collective enterprise, and with everyone assisting, it is to be hoped that some truly worth while work is accomplished.

All years must realize the personal responsibility imposed upon everyone who in wartime is enjoying a University education. This privilege should not be regarded lightly. Especially in Architecture, the time spent here should be used to the fullest advantage in preparing for meeting the necessities of the present and the expected renaissance of the near future.

C. F. T. ROUNTHWAITE,
Chairman.

CIVIL CLUB

School Men,

On behalf of the Civil Club, I wish to extend at this time a cordial welcome and a sincere wish for success to all Schoolmen, new and old, during the coming academic year. I refer this wish to those in all other Departments as well as to those in Department 1. I trust that our many tasks and endeavours during the school year will not interfere to too great an extent with the activities of the Club and its members. With your help and assisting co-operation, there is no reason for anything but a successful Club year by way of luncheon meetings, smokers, field trips and other entertainments which you may suggest. Again I say, "Welcome and may good fortune be yours for this school year".

WALTER GLYNN,
Chairman.

ENGINEERING PHYSICS CLUB

Well, gang (and Freshmen), here we are back once again at the "Little Red Schoolhouse".

To recall Vic Mason's words, this Club is run for your benefit, and your suggestions are welcomed. But, in order to benefit by it, YOU, too, should

attend its meetings; Let us have your ideas and criticisms BEFORE meetings.

But enough of that (and so early in the year!). Perhaps you are wondering about the apparent neglect of election of officers last spring. It was thought that, due to unsettled conditions, it would be better to leave it until this fall—hence, forward with the nominations.

I almost forgot to remind the Sophs that the Freshmen are just "aching" to become familiar with ALL School activities (and points of interest).

C. B. LIVINGSTON,
Chairman.

INDUSTRIAL CHEMICAL CLUB

To you who are addicted to ye Chemistry, I extend greetings and salutations. Welcome back to the realm of profound learning and potent odours.

This year, your club executive will endeavour to provide you with the ultimate in club activities and entertainments throughout the coming year. The success of our efforts depends chiefly upon you and your support, member, therefore get behind your club and push. Make the old "Chem Club" soar to a new high in "School" attainment.

An Initiation Stag has been proposed as an appropriate function to open the new term. This should provide an excellent means of greeting and acquainting ourselves with the Freshmen Chemical Engineers. Such an event promises to be a night of festivity that no Chemical can afford to miss—especially the Freshmen.

For further particulars concerning the stag, watch your bulletin board.

ERIC E. BONHAM,
Chairman.

ELECTRICAL CLUB

Most of us are returning to School from our various locations and occupations throughout the province to continue our study of Electrical Engineering, while the first year men are taking their first step in their chosen profession. We are happy to welcome the Freshmen to our midst and hope they will make it a point to attend the Electrical Club meetings.

The Electrical Club, made up of all the undergraduates in Electrical Engineering, exists for the purpose of fostering inter-year acquaintances and to make us more familiar with what lies ahead after graduation.

The Executive will be elected during the first week of School and the first meeting (reception for the frosh) will be held early in October.

KEN. BUCHANAN,
Chairman.

C.O.T.C. CAMP

The voyage to camp provided an opportunity for us to become familiar with army methods of transporting troops, and to remark upon the realistic atmosphere provided by walking up a gangplank in full equipment. Fortunately we enjoyed a safe passage without the need of repeating the "Birkenhead" act. Nevertheless, some of the more practical souls had carefully calculated the buoyancy of an empty service water bottle. We landed at Niagara wharf without serious incident and proceeded to camp.

After arriving at camp in proper style, paying the proper compliments, and being dismissed in the proper manner, everyone began to check up on the efforts of the advance party. The remainder of the day was spent in being issued with and acquiring all available comforts for the two-week period.

Monday we were gently broken in to camp routine with a six hundred hour bugle call. Most people never hear that bugle, it takes a brass band playing "Home, Sweet Home" (in pyjamas and great coats), to get them awake, a pipe band to get them out of bed, and a sergeant-major to chivy them along for P.T. Those who can resist all three of these stimulating morning "pick-me-ups" are put in a class by themselves.

The Engineer Coy., under the command of Lt.-Col. Howlett, Major Taft and Major Duncan, made a point of taking the two-week course seriously. The most delightful periods of the whole day were the outdoor noonday meals. Benedictions by the thousand were heaped upon the heads of the Coy. O.C. and the Quartermaster, Mr. Johnson, for this magnificent noonday entertainment. Transportation for the Engineers was also well arranged. The company was divided into syndicates—some rode, others marched. One was apt to become confused as to which group he belonged with when it came to the question of riding or walking.

By far the most interesting were the night schemes. Some of the most remarkable things are learned stumbling about the Niagara Peninsula after dark. In our particular syndicate, we could find dozens of north stars and run circles around any night traverse you cared to name.

Night schemes were usually concluded at the company cookhouse with sandwiches and coffee. Other night schemes, of a more private nature, were undertaken by many individuals and are best told by them. It is rumoured that some ambitious overtime workers have made a complete and thorough survey of Niagara-on-the-Lake and its hinter-

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DEAN'S MESSAGE

engineering enterprises generally do, can be entrusted only to men with a long and rigorous preparation. It is for this reason that governmental authorities, organizations of engineers and engineering educators believe that the engineering colleges should continue to offer their regular courses and undertake to operate normally in respect of both the content and the length of courses.

There is no magic way of training a fully qualified engineer and no less exacting substitute for the work that will be required of you during your four years as a student in this Faculty. The engineer must possess a sound knowledge of many sciences; he must know something of business, of the availability of men and materials, of the art of management; and he must be able to utilize these and all other resources at his command to produce the thing that is needed, not only at the stipulated time but also within the financial limits that have been established. The ability to do this cannot be imparted overnight, or in a month, or in a year. It requires not only long and faithful study but experience as well. It is for the first of these that you now present yourselves at the portals of this University.

But while the urgencies of war are great and may continue to rest upon us for some time yet, we must not forget the normal task of an engineering college: to set young men in the way of becoming fully qualified professional engineers. It is not enough that they should have merely a wide knowledge of scientific principles or be the masters off many techniques and procedures. They must, if they are to be regarded as fitting members of a learned profession, be more than efficient technicians. They must be well and broadly educated, must know how to conduct themselves with poise and confidence in any society, and must exhibit the public spirit that characterizes every good citizen. There are in and about the University the means by which any alert and observant young man can set himself far along the road that leads to this high objective. In your own long-range interests I would urge you to make good use of them.

In your enrolment as students in what is still affectionately called "School" by both graduates and undergraduates, although the old School of Practical Science merged into the Faculty of Applied Science and Engineering of the University thirty-five years ago, you become at once the inheritors and the custodians of a great tradition. It is the tradition of "School men" to "play the game" in all that the

phase implies. A School man that lives up to the tradition is straightforward, absolutely dependable, strictly regardless of the rights, wishes and needs of others, co-operative, and completely loyal to his friends and associates. Those School men who in some far away corner of the earth have by good chance run into another School man can tell you with eloquence what the School tradition means.

There may be in your first weeks in the Faculty some situations that prove to be perplexing and difficult. If such do arise, by all means consult some member of the staff. He will be delighted to see you. Through diffidence, some students are reluctant to speak to others of their difficulties. These are the very ones that should make the approach, for one of the necessary characteristics of a good engineer is a willingness and readiness to face disagreeable problems promptly and resolutely.

For all men of the First Year I wish a happy and successful Session. Your own studiousness, orderliness and conscientiousness will be the greatest factor in ensuring that outcome.

C. R. YOUNG,
Dean.

September 17, 1941.

PRESIDENT'S MESSAGE

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We have won the Reed Trophy, symbolic of athletic superiority, for the last four years. You Freshmen play an ever growing part in winning this trophy, so go out and give all you have for School. We want that trophy again.

As the time passes and you move from year to year, the executive business of the Engineering Society will fall on your shoulders. Prepare yourselves for these positions and take an active part in the Society. Very shortly you will have to elect from among yourselves a class executive. Choose these men carefully and make sure that they are men you will be proud to have represent your class.

However, bear in mind that your main purpose here is to receive an engineering education. The staff here has a world-wide reputation and the instruction you will receive from them will be of the very best. It is to be hoped that you will realize this and make the most of your opportunity.

To you, the men of 4T5, the Engineering Society Executive wishes the best of luck and success in your next four years, and hope that in passing through this Faculty you will leave some contribution which is up to the standard of your predecessors.

BILL BRUNDRIT,
President.

DRAFTING SUPPLIES

The following list of supplies may be purchased at the Engineering Society Supply Department:—

1 Drawing Board 23" x 31".....	\$ 1.75
1 Tee Square 30".....	2.25
1 Tee Square 10".....	.85
1 Set Square 14"-60°.....	1.00
1 Set Square 10"-45°.....	.60
1 Dozen Thumb Tacks.....	.05
1 Fractional Scale.....	.45
1 Decimal Scale.....	.45
1 Pencil Pointer.....	.10
1-H, 2H, 3H Pencil.....	.25
1 Pencil Rubber.....	.15
1 Ink Rubber.....	.10
3 Bottles Ink — (Black, Red and Blue).....	.90
4 Sheets Drawing Paper.....	.60
1 Portfolio.....	.95
1 Dusting Brush.....	.45
1 Penholder.....	.05
6 Pen Nibs, No. 312 and No. 303.....	.10
1 Erasing Shield.....	.15
2 Sketch Problem Covers.....	.05
1 Sketch Problem Pad.....	.15

TOTAL.....\$11.40

Leather Notebook with Refill.....	\$ 4.50
Leather Zipper Notebook with Refill.....	6.25

The above list is solely to guide you in purchasing the materials which you will require almost immediately. The leather notebook listed has a serviceable open cover of full grain leather. The Supply Department carries a large stock of refills, pencils, lab coats, and so on, but your text books may be obtained from the Students' Book Department, in behind the Physics Building, at reduced rates. The S.A.C. in Hart House has a book exchange, where second-hand books may be obtained at a very reasonable price. However, do not buy your books until each lecturer has told you what you will require.

C.O.T.C. CAMP

land, including the resources both natural and otherwise, places of interest, where to go, and what to see.

Swiftly the two weeks passed and we all rejoiced in taking home such a wonderful suntan that our friends scarcely recognized us. The camp did much to promote a spirit of comradeship among us all; in fact, we found out the most surprising things about each other. Life in a tent seems to allow the real character plenty of rein, and consequently a number of fellows won the lasting respect of all who came in contact with them.

Freshmen starting military training for the first time should remember that the School companies have a long and fine record. This reputation, in the words of a lumber camp dining room notice regarding order—"must and will be maintained"! C.F.T.R.